




START

Department of Energy

Richland Operations Office
P.O. Box 550
Richland, Washington 99352

0023435

Incoming: 9206437

Mr. Roger Stanley 
Washington Department of Ecology
Mail Stop PV-11
Olympia, WA 98504

AUG 19 1986

Mr. Wayne Pierre
U. S. Environmental Protection Agency
1200 Sixth Avenue
Seattle, WA 98101

Dear Mr. Stanley and Mr. Pierre:

183-H HAZARDOUS WASTE GROUND WATER MONITORING PROGRAM - INVITATION FOR BID

The enclosed copy of the above cited document is provided in response to your request for the Request For Proposal (RFP) for the 183-H project.

If you have any questions please contact Mr. P. J. Krupin on (509) 376-9989.

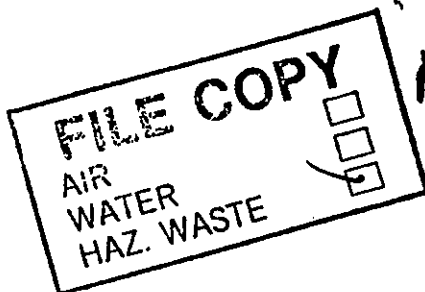
Sincerely,



Ronald E. Gerton, Director
Environment, Safety, and Health
Division

ES&H:PJK

Enclosure



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OLYMPIA, WA 98504

WASHINGTON DEPT OF ECOLOGY

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Battelle

Pacific Northwest Laboratories
P.O. Box 999
Richland, Washington U.S.A. 99352
Telephone (509) 376-8639
Telex 15-2874

July 28, 1986

Mr. Robert F. Potter, Director
Decommissioning Programs Department
UNC Nuclear Industries
P.O. Box 490
Richland, WA 99352

RECEIVED

JUL 30 1986

R.F. POTTER

Dear Mr. Potter:

JAJ-1873(PNL) - INVITATION FOR BID

Ref: Meeting Minutes prepared by M. E. Olson, dated June 19, 1986, subject
Ground-Water Monitoring Wells - 100H Area.

Attached is a copy of the bid package for the ground-water monitoring wells to be drilled near the 183-H Solar Evaporation Basins, per the referenced minutes. This package contains all information sent to each prospective bidder, except the standard Contract General Provisions and General Conditions. If you have any questions concerning this package, please contact T. L. Liikala at 376-0117.

Sincerely,

Rodger Woodmuff for

C. E. Elderkin
Associate Manager for Hanford Programs
EARTH SCIENCES DEPARTMENT

CEE:TLL:gd

Attachment

xc: J. F. Bertsch, UNC
J. J. Broderick, DOE-RL
B. W. Mathis, UNC
E. M. Greager, UNC
D. G. Kachele, UNC
P. J. Krupin, DOE-RL
L. W. Vance, UNC
R. A. Winship, UNC



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JAJ-1873 (PNL)

GROUND-WATER MONITORING WELLS, 100-H AREA,
HANFORD SITE, RICHLAND, WASHINGTON

Invitation: July 21, 1986
Site: July 29, 1986
Bid: August 1, 1986

ONWEGO DRILLING CO., INC.
Route 14, Box 3010
Kennewick, WA 99337
(509)582-4026

B & H DRILLING #2
P. O. Box 343
Burbank, WA 99323
(509)545-5637

RICHARDSON'S WELL DRILLING
P. O. Box 44427
Tacoma, WA 98444
(206)537-7332

HOLT DRILLING, INC.
12515 32nd Street, East
Puyallup, WA 98372
(206)863-2781

DIKEMAN BROS., DRILLING & EXCAVATION
Route 6, Box 1705
Ellensburg, WA 98926
(509)925-9692

E. A. HOLMAN DRILLING CO.
601 S. Pines Road
Spokane, WA 99206
(509)926-8150

WEST COAST DRILLING
220 Academy Street
Mount Angel, OR 97362
(503)845-6824

H. O. MEYER DRILLING CO., INC.
6424 Lake Washington Blvd., NE
Kirkland, WA 98033
(206)868-5858

JOHN P. GOODALL
P. O. Box 754
Moses Lake, WA 98837
(509)765-5218

ASSOCIATED WELL DRILLERS, INC.
P. O. Box 723
Coeur d'Alene, ID 83814
(208)772-3230

B & H DRILLING
Route 3, Box 3365A
Kennewick, WA 99337
(509)586-4639

NELSON WELL DRILLING, INC.
10036 West Argent
Pasco, WA 99301
(509)547-3018

COEUR d'ALENE DRILLING, INC.
P. O. Box 386
Hayden Lake, ID 83835
(208)772-5609

AQUA ENTERPRISES, INC.
P. O. Box 1499
Coeur d'Alene, ID 83814
(208)772-5775

TACOMA PUMP & DRILLING CO., INC.
30316 Mountain Highway
Graham, WA 98338
(206)847-6087

HOKKAIDO DRILLING
P. O. Box 100
Graham, WA 98338
(206)847-3579

MTN. STATE DRILLING
232 So. Cole Road
Boise, ID 83709
(208)

23127601810

BID INVITATION NO. JAJ-1873 (PNL) CONT.

cc: Contract File*
J. T. Broderick DOE
K. M. DeMonia PNL
C. H. Buchman*
J. D. Sivulka*
G. K. Curtis*
F. A. Gauthier*
R. C. Niemuth*
T. H. Lovatt (2)
D. J. Foust
F. S. DeVine
M. A. Colby

73127601811

MAC
INVITATION FOR BID

Issued by: J. A. JONES CONSTRUCTION SERVICES
COMPANY (JAJ)
801 First Street
Richland, Washington 99352-0560

Invitation No.: JAJ-1873 (PNL)
Contract No.: DE-AC06-76RLO0687
Date Issued: July 21, 1986

Name and Location of Project: GROUND-WATER MONITORING WELLS, 100-H AREA, HANFORD
SITE, RICHLAND, WASHINGTON

SET ASIDE FOR SMALL BUSINESS - (See Page -5-)

1. Receipt of Bids. Sealed bids for furnishing all labor, equipment and materials and performing all work for the project described herein will be received until 2:00 p.m., local time at place of bid opening, August 1, 1986, 801 First Street, Building 1264, Richland, Washington, and then publicly opened.

2. Bid Guarantee (also see paragraph 8 below). Bid guarantee in a penal sum of not less than twenty percent of the bid price will be required with each bid if the bid price is in excess of \$2,000.00.

3. Revision of Contract Documents Prior to Receipt of Bids. The right is reserved, as the interest of the JAJ may require, to revise or amend the Contract General Provisions dated March 1985, General Conditions dated March 1985, Special Conditions, Specifications, and Drawings prior to the date set for opening bids. Such revisions and amendments, if any, will be announced by an addendum, or addenda, to this invitation for bids. Copies of such addenda, as may be issued, will be furnished to all prospective bidders. If the revisions and amendments are of a nature which require material changes in quantities or prices bid, or both, the date set for bid opening will be postponed by such number of days as in the opinion of the JAJ will enable bidders to revise their bids. In such case the addendum will include an announcement of the new date for opening bids.

4. Obtaining Bid Assemblies. Bid assemblies, including drawings and specifications may be obtained upon written request addressed to: J. A. Jones Construction Services Company, 801 First Street, Richland, WA, 99352-0560 - Attention: Contract Placement Department, 1264 Building, in accordance with the following:

(a) Bid Assemblies will be furnished prospective bidders, including general contractors, subcontractors, and material and equipment suppliers, upon receipt of payment in the amount of no charge per assembly.

(b) Payment must accompany the requests, and shall be made by cash, check, certified check or postal money order. Checks and money orders shall be made payable to "TREASURER OF THE UNITED STATES". No refund of the payments will be made, and the bid assemblies need not be returned to the issuing office.

(c) A complete bid assembly, including the drawings and specifications, will be available for inspection until the time set for receiving bids, at the offices of the J. A. JONES CONSTRUCTION SERVICES COMPANY, 801 First Street, Richland, Washington; and the Tri-City Construction Council Plan Center, 34 Vista Way, Kennewick, Washington.

(d) Bid assemblies will be issued without charge to plan centers such as the one listed above.

SITE INSPECTION: Site inspection is scheduled to start at 801 First Street, Building 1264, at 1:00 p.m., July 29, 1986. PLEASE RETURN THE ATTACHED CARD IMMEDIATELY, listing the names of those who will be present for the site inspection. Please direct all inquiries to M. A. Colby, Telephone (509)376-6136.

Invitation for Bid (Cont.)

5. Explanations and Interpretations. Any explanation desired by bidders regarding the meaning or interpretation of the Contract General Provisions, General Conditions, Special Conditions, Drawings, and Specifications must be requested in writing to this office, Attention: Contract Placement Manager, and with sufficient time allowed for a reply to reach them before the submission of their bids. Oral explanations or instructions given before the award of the contract will not be binding. Any interpretation made will be in the form of an addendum and will be furnished to all bidders and its receipt by the bidder shall be acknowledged.

6. Site Investigation. Bidders should visit the site to ascertain pertinent local conditions readily determined by inspection and inquiry, such as the location, accessibility and general character of the site, labor conditions, the character and extent of existing work within or adjacent thereto, and any other work being performed thereon.

7. Responsible Prospective Contractors. To be considered for an award, a bidder must be able to demonstrate to the satisfaction of the JAJ that he:

(a) has (or is able to obtain) the necessary financial resources, organization, experience, technical skills, construction equipment and facilities to successfully perform the contract work.

(b) is able to comply with the specified performance schedules.

(c) has a satisfactory record of performance, integrity and business ethics.

Prior to the award of a contract, the JAJ may request the bidder to submit a statement of facts in sufficient detail and with adequate support to demonstrate that the bidder meets the foregoing standards.

8. Bid Guarantee (also see paragraph 2. above).

(a) When security is required failure to submit the same with the bid shall ~~be cause for rejection.~~ The bidder, at his option, may furnish a bid bond, postal money order, certified check, or cashier's check, or may deposit, in accordance with Treasury Department regulations, bonds or notes of the United States (at par value) as security in the amount required.

(b) If a bid bond is used for bid guarantee, it should be submitted on the Bid Bond form furnished with the bid assembly.

(c) In case security is in the form of postal money order, certified check, cashier's check, or bonds, or notes of the United States, the JAJ may make such disposition of the same as will accomplish the purpose for which submitted. Checks may be held uncollected at the bidder's risk. Checks, or the amounts thereof, and bonds or notes of the United States deposited by unsuccessful bidders will be returned as soon as practicable after the opening.

Invitation for Bid (Cont.)

9. Submission of Bids.

(a) Bids shall be submitted on the forms furnished, or copies thereof, and must be manually signed. If erasures or other changes appear on the forms, each such erasure or change must be initialed by the person signing the bid.

(b) The form of bid will provide for quotation of a price, or prices, for one or more items which may be lump sum bids, alternate prices, scheduled items resulting in a bid on a unit of construction or a combination thereof, etc. Where required on a bid form, bidders must quote on all items, and they are warned that failure to do so may disqualify the bid. When quotations on all items are not required, bidders should insert the words "no bid" in the space provided for any item on which no quotation is made.

(c) Alternative bids will not be considered unless called for.

(d) Unless specifically called for, telegraphic bids will not be considered. Modification by telegraph of bids already submitted will be considered if received prior to the time fixed in the Invitation for Bid. Telegraphic modifications shall not reveal the amount of the original or revised bid.

(e) Bid must be submitted as directed on the bid form.

(f) No responsibility will attach to the JAJ for the premature opening of, or the failure to open, a bid not properly addressed and identified.

10. Late Bids

Bids received at the place designated in the Invitation for Bid after the exact time fixed for the opening of bids are "late bids".

(a) A late bid shall not be considered unless it is received in the office designated in the Invitation for Bid before award is made, and either:

(1) It was sent by registered or certified mail not later than the fifth calendar day prior to the date specified for the receipt (e.g., a bid submitted in response to an Invitation for Bid requiring receipt of bid by the 20th of the month must have been mailed by the 15th or earlier); or

(2) It was sent by mail (or telegram if authorized) and it is determined by the JAJ that the late receipt was due solely to mishandling by the JAJ after receipt at the JAJ installation.

(b) The only acceptable evidence to establish the date of mailing of a late bid sent either by registered or certified mail is a U. S. Postal Service postmark on the wrapper or on the original receipt from the U. S. Postal Service. If neither postmark shows a legible date, the bid shall be deemed to have been mailed late. (The term "postmark" means a printed, stamped or otherwise placed impression (exclusive of a postage meter machine impression) that is readily identifiable without further action as having been supplied and affixed on the date of mailing by employees of the U. S. Postal Service.

Invitation for Bid (Cont.)

of the Notice of Requirements for Affirmative Action to Ensure Equal Employment Opportunity (Executive Order 11246).

18. Wage Rates. The wage rates furnished with this Invitation for Bid are the minimum rates which may be paid to the classifications of laborers and mechanics designated therein pursuant to the Davis-Bacon Act (Act of March 3, 1931, as amended: 40 U.S.C. 276a and following). The JAJ does not represent that said minimum wage rates do now, nor that they will at any time in the future, prevail in the locality of the work for such laborers and mechanics; nor that such mechanics or laborers are or will be obtainable at said rates for work under this contract; nor that said rates represent the most recent wage determinations by the Secretary of Labor with respect to such classifications of laborers or mechanics in the locality of the work.

19. Information Regarding Buy American Act

(a) The Buy American Act (41 U.S.C. 10a - 10d) generally requires that only domestic construction material be used in the performance of this contract. (See the article entitled "Buy American Act" in the Contract General Provisions.)

(b) (1) Furthermore, bids or proposals offering use of additional nondomestic construction material may be acceptable for award if the JAJ determines that use of comparable domestic construction material is impracticable or would unreasonably increase the cost or that domestic construction material (in sufficient and reasonably available commercial quantities and of a satisfactory quality) is unavailable. Reliable evidence shall be furnished justifying such use of additional nondomestic construction material.

(2) Where it is alleged that use of domestic construction material would unreasonably increase the cost:

a. Data shall be included, based on a reasonable canvass of suppliers, demonstrating that the cost of each such domestic construction material would exceed by more than 6 percent the cost of comparable nondomestic construction material. (All cost of delivery to the construction site shall be included, as well as any applicable duty.)

b. For evaluation purposes, 6 percent of the cost of all additional nondomestic construction material, which qualified under paragraph a. above, will be added to the bid or proposal.

(3) When offering additional nondomestic construction material, bids or proposals may also offer, at stated prices, any available comparable domestic construction material, so as to avoid the possibility that failure of a nondomestic construction material to be acceptable, under (1) above, will cause rejection of the entire bid.

(4) The required data to justify use of additional nondomestic material must be submitted with the bid.

NOTICE OF SMALL BUSINESS SET-ASIDE

1. Restriction. Bids under this invitation are solicited from small business concerns only and the resulting contract is to be awarded only to a small business concern. This action is based on a determination by the Department of Energy and the

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Invitation for Bid (Cont.)

Small Business Administration, that, it is in the interest of maintaining or mobilizing the Nation's full productive capacity, in the interest of war or national defense programs, or in the interest of assuring that a fair proportion of Government procurement is placed with small business concerns. Bids received from firms which are not small business concerns shall be considered nonresponsive.

2. Definition. A "small business concern" is a concern, including its affiliates which is independently owned and operated, is not dominant in the field of operation in which it is bidding on Government contracts, had average annual receipts for the preceding three fiscal years not exceeding \$17 million if bidding on a general construction contract; not exceeding \$7 million if bidding on a special trade contract; \$9.5 million if bidding on a dredging contract. (For additional information see governing regulations of the Small Business Administration (13 CFR Part 121).

NOTE: For small business definition purposes, this Invitation No. JAJ-1873 (PNL) is classed as a "special trade [well drilling] contract".

93127501816

B I D

To: J. A. Jones Construction Services
Company (JAJ)
801 First Street
Richland, Washington 99352-0560

Invitation No. JAJ-1873 (PNL)

Date of Invitation: July 21, 1986

Date of Bid:

Name and Location of Project:
GROUND-WATER MONITORING WELLS, 100-H AREA,
HANFORD SITE, RICHLAND, WASHINGTON

Name of Bidder (Type or Print)

In compliance with your Invitation for Bid No. JAJ- 1873 (PNL) of the above date, the undersigned hereby proposes to furnish all labor, equipment and materials and perform all work for construction of Ground-Water Monitoring Wells, including certain related work, 100-H Area, Hanford Site, Richland, Washington

in strict accordance with the Notice of Requirements for Affirmative Action to Ensure Equal Employment Opportunity (Executive Order 11246); if applicable, the Contract General Provisions dated March 1985, General Conditions dated March 1985, Special Conditions, Specifications and Drawings attached to the above referenced Invitation for Bid, for the consideration of the following amount(s): (as indicated in the attached Schedule of Unit Price Items (Pages -1a- and -1b-), which is herein made a part of the Bid Form:)

The undersigned agrees that, upon written acceptance of this bid, mailed or otherwise furnished within sixty (60) calendar days (unless a different period be inserted by the bidder) after the date of opening of bids, he will within seven (7) calendar days (unless a longer period is allowed) after receipt of the prescribed forms, execute the Contract form similar to as attached to the Invitation for Bid, and give Performance Bond and Payment Bond in the penal sums indicated in the Contract General Provisions with good and sufficient surety or sureties.

The undersigned agrees that if awarded the contract, he will commence work within five (5) calendar days after the date of receipt of notice to proceed, and that he will complete the work in accordance with Paragraph SC-4., a. of the Special Conditions.

The undersigned acknowledges receipt of the following addenda:

Addendum
Number

Date of
Addendum

23127501817

SCHEDULE OF UNIT PRICE ITEMS
(attachment)

The quantities of unit price items listed below are estimates only and may increase substantially as stated in Paragraph SC-20 of the Special Conditions. The Contractor will be required to complete the work specified in accordance with the contract unit prices whether it involves quantities greater or less than the following estimates:

<u>Item No.</u>	<u>Description</u>	<u>Unit</u>	<u>Estimated Quantity</u>	<u>Unit Price</u>	<u>Estimated Amount</u>
1.	Drill hole for 12" casing.	LF	200	\$ _____	\$ _____
2.	Drill hole for 10" casing.	LF	1,320	\$ _____	\$ _____
3.	Furnish 12-inch casing.	LF	200	\$ _____	\$ _____
4.	Furnish 10-inch casing.	LF	840	\$ _____	\$ _____
5.	Furnish 12-inch drive shoe.	EA	3	\$ _____	\$ _____
6.	Furnish 10-inch drive shoe.	EA	7	\$ _____	\$ _____
7.	Install and pull 12-inch casing.	LF	200	\$ _____	\$ _____
8.	Install and pull 10-inch casing.	LF	1,520	\$ _____	\$ _____
9.	Furnish 6-inch SS casing.	LF	1,230	\$ _____	\$ _____
10.	Install 6-inch SS casing.	LF	1,230	\$ _____	\$ _____
11.	Furnish 10-inch SS well screen.	LF	130	\$ _____	\$ _____
12.	Furnish 6-inch SS well screen.	LF	215	\$ _____	\$ _____
13.	Install 10-inch SS well screen.	LF	130	\$ _____	\$ _____
14.	Install 6-inch SS well screen.	LF	215	\$ _____	\$ _____
15.	Furnish and place Bentonite, powder and granular type.	CU FT	320	\$ _____	\$ _____

No. JAJ-1873 (PNL)

<u>Item No.</u>	<u>Description</u>	<u>Unit</u>	<u>Estimated Quantity</u>	<u>Unit Price</u>	<u>Estimated Amount</u>
16.	Furnish and place Bentonite, pellet type.	CU FT	30	\$ _____	\$ _____
17.	Furnish and place sand pack.	CU FT	110	\$ _____	\$ _____
18.	Furnish and place concrete.	CU FT	65	\$ _____	\$ _____
19.	Furnish and install brass survey marker.	EA	16	\$ _____	\$ _____
20.	Furnish and install locking well cap.	EA	16	\$ _____	\$ _____
21.	Furnish and install steel posts (4" dia. x 6').	EA	64	\$ _____	\$ _____
22.	Special work.	CREW HOUR*	280	\$ _____	\$ _____
23.	Crew standby time.	CREW HOUR*	40	\$ _____	\$ _____
24.	Equipment standby time.	EQUIP. HOUR*	40	\$ _____	\$ _____
TOTAL ESTIMATED AMOUNT (Sum of Items 1 through 24) - - - - -					\$ _____

* Or pro rata fraction thereof for any fraction of an hour.

Measurement and payment for the foregoing items shall be in accordance with the applicable provisions of Paragraph SC-12 of the Special Conditions.

No. JAJ-1873 (PNL)

SPECIAL CONDITIONS

GROUND-WATER MONITORING WELLS, 100-H AREA,
HANFORD SITE, RICHLAND, WASHINGTON

J. A. JONES CONSTRUCTION SERVICES COMPANY
HANFORD SITE, RICHLAND, WASHINGTON
JULY 18, 1986

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SPECIAL CONDITIONS

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SPECIAL CONDITIONS

SC-1. STATEMENT OF WORK

The work consists of furnishing all labor, equipment and materials, and performing all work in strict accordance with these specifications, schedules and drawings forming parts thereof, for construction of ground-water monitoring wells, including certain related work, 100-H Area, Hanford Site, Richland, Washington.

SC-2. LOCATION OF WORK

The work site is located in the northern section of the 100-H Area (within the Controlled Access Area of the Hanford Site), approximately 37 miles road distance from Richland, Washington.

SC-3. BADGE AND ORIENTATION REQUIREMENTS

The work site is located in a Radiation Zone within the Controlled Access Area of the Hanford Site, but outside of Limited Areas. Badge and orientation requirements will be as for a Limited Area in accordance with paragraph GC-6 of the General Conditions. (Note: See Paragraph SC-15., e., herein, for prerequisite Radiation Training and Medical Examination requirements in Radiation Zone.)

SC-4. COMMENCEMENT AND COMPLETION OF WORK

- a. The Contractor shall commence work under this contract within five (5) calendar days after receipt by him of written notice to proceed, and shall complete all work within one hundred (100) calendar days after receipt of written notice to proceed. The notice to proceed will be deemed received five (5) calendar days after the mailing date of the notice, unless the notice is actually received by the Contractor at an earlier date.
- b. The time specified for completion of the construction work shall include final cleanup of the premises.
- c. It is anticipated that the notice to proceed with the performance required by the terms of the contract will be issued within approximately seven (7) calendar days after award of the contract.
- d. Immediately after contract award, submit the following items as required by Paragraph GC-10 of the General Conditions: Acceptable safety program, including job safety analysis; name of individual assigned to administer safety program; two years prior industrial injury/illness experience and construction equipment

SC-4. COMMENCEMENT AND COMPLETION OF WORK CONT.

certifications. The Contractor's safety submittals must be acceptable to the JAJ prior to badging of personnel and/or commencement of any on-site work.

Delays caused by the Contractor's failure to submit an acceptable safety program in a timely manner shall not be an excusable delay under Article 41 of the Contract General Provisions.

- e. Additional wells may be added to the contract work scope as stated in Paragraph SC-20, herein. In such an event, an adjustment will be made in the contract performance time to allow for construction of the additional wells. (See Paragraph SC-20, herein.) No changes will be made in the contract unit prices.

SC-5. LIQUIDATED DAMAGES

None.

SC-6. SPECIFICATIONS AND DRAWINGS

Four (4) sets of specifications and drawings will be furnished the Contractor without charge. Additional sets will be furnished on request at the cost of reproduction. The work shall conform to the following specifications, standards, drawings, and all other documents as listed herein, all of which are available in the Contract Placement Manager's office of the J. A. Jones Construction Services Company, 801 First Street, Richland, Washington.

a. Basic Specifications (Technical Provisions)

Specification No. PNL-SOW.183-H. Statement of Work, Well Drilling Specifications, 183-H Solar Evaporation Basins, Revision 0, Dated July 15, 1986. (Includes Figures 1 through 6.)

b. Radiation Work Permit (RWP)

Radiation Work Permit No. 86-123, Latest Approval Date: 7-16-86.
(Note: This RWP is for Phase 1 Drilling. If Phase 2 drilling is performed (see Paragraph SC-20) a similar RWP will be issued when required.)

SC-7. JAJ-FURNISHED MATERIAL, FACILITIES AND SERVICES

The JAJ will provide to the Contractor, and except as otherwise specified, at no charge to the Contractor, the following material, facilities and services listed hereunder for incorporation in the

SC-7. JAJ-FURNISHED MATERIAL, FACILITIES AND SERVICES

work and/or use in performance of the work: (Any work or action indicated to be accomplished by the Contractor, including the furnishing of materials therefor unless otherwise specified, shall be at his own expense. The JAJ will not be liable for any additional expense or loss incurred by the Contractor as a result of delays in providing any of the materials, facilities or services listed hereunder unless such delays are proximately caused by the negligence of the JAJ.)

a. First Aid

First aid at existing facilities, Building No. 1100-N, inside the 100-N Area, located approximately 8 miles road distance from the work sites.

b. Operations and Storage Areas

Areas which will be designated by the JAJ in the vicinity of the work site may be utilized by the Contractor for work and storage areas, as further set forth in paragraph GC-13 of the General Conditions.

c. Water

Water for construction, drinking and testing purposes will be made available from the 100 Area or 300 Area Fire Stations, located approximately 8 and 30 miles road distance, respectively, from the work sites. (All hauling and dispensing of water, and all temporary pipe or hose extensions shall be by the Contractor. Fittings provided by the Contractor for connection to the water source shall be approved by the JAJ prior to installation. Before final acceptance of the contract work, the Contractor shall remove all temporary piping, hose and valves installed by him.)

d. Disposal Site(s) for Waste

Disposal of wastes shall be at site(s), as indicated in the field by the JAJ, approximately 20 miles from the work site, as follows:

- (1) A site where the Contractor shall dispose of non-burnable trash, debris, old tires, roofing materials and broken asphaltic paving and concrete.
- (2) A site where the Contractor shall dispose of burnable trash and debris.

SC-7. JAJ-FURNISHED MATERIAL, FACILITIES AND SERVICES CONT.

NOTE: Disposal sites are open only during regular working hours as stated in paragraph GC-15 of the General Conditions.

e. Protective Clothing

All required protective clothing will be furnished in a change room located adjacent to the work site, (see paragraph SC-15, Special Radiological Conditions).

f. Basic Survey Data

The location of the wells will be staked by others prior to start of on-site work.

g. Drill Log Forms

All required drill log forms will be furnished by others at the work site.

h. Workmen's Compensation

See paragraph SC-14 for applicable provisions concerning Workmen's Compensation coverage for work under this contract.

SC-8. WORK PERFORMED BY OTHERS

The following work (including the furnishing of materials therefor, unless otherwise specified) relative to the construction included in this contract, will be performed by others:

- a. All work designated in the specifications to be performed by "PNL" or by "PNL Geologist".
- b. Staking of well locations.
- c. All radiation and hazardous waste monitoring.
- d. Furnishing and installation of padlocks for the locking well caps.
- e. Disposal of contaminated materials and/or water, if encountered. (See Paragraph 3.1, F., on Page 7 of Specification No. PNL-SOW. 183-H.)

SC-9. FIELD OFFICE

Establishment of a field office will not be required; however, a copy of all drawings, specifications and other information pertinent to the proper and efficient prosecution of the contract work shall be kept by the Contractor at the work site, and the authorized representative of the JAJ shall have access thereto at all times.

SC-10. SPECIAL LIMITATIONS, REQUIREMENTS AND WORKING CONDITIONS

(See paragraph GC-14 of the General Conditions for general limitations, requirements and working conditions.)

a. Progress Meetings

Progress meetings will be held an average of twice each month to discuss work progress, procurement status, etc. The duration of each meeting will be approximately one hour.

b. Damage to Existing Facilities

All existing roadways, walks, parking areas, buildings, and all other facilities which may become damaged or soiled as a result of the Contractor's operations shall be restored to their original condition by the Contractor, as directed by the JAJ.

c. Operation of Drill Rigs, Cranes or Hoists Near Electrical Lines

When drill rigs, cranes or hoists are operated under or adjacent to existing overhead electrical lines, a standby lineman (furnished by the JAJ without cost to the Contractor) must be in attendance. The Contractor shall notify the JAJ not less than three working days prior to the date that the standby lineman will be required. (Also, see paragraph GC-14, C of the General Conditions.)

d. Use Of PCB's Prohibited

No polychlorinated biphenyls shall be brought to the worksite or incorporated into any installation covered by this contract.

e. Coordination With Work by Others At Site

Certain work relative to the construction included in this contract (as stated in paragraph SC-8, herein) will be performed by others during the period of this contract. The Contractor shall cooperate with others working at the site and shall coordinate his work with that of others so as to eliminate interferences and delays.

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SC-10. SPECIAL LIMITATIONS, REQUIREMENTS AND WORKING CONDITIONS CONT.

f. Pre-Job Conference on Hanford Site Labor Requirements

Prior to commencing the on-site work, the Contractor shall attend an informational pre-job conference on Hanford Site labor requirements applicable to the awarded contract. Such conference will be conducted by the JAJ and representatives from labor organizations whose members may be utilized in the course of construction. (See Contract General Conditions, Paragraph GC-27, Labor Provisions.) (Note: The JAJ will give the Contractor advance notice of the meeting date and its location.)

g. Special Excavation Requirements

Prior to commencing any machine excavation, the Contractor shall locate and expose all known underground utilities by means of hand excavation. Machine excavation shall commence only after specific approval is received from the JAJ. (See GC-12 and GC-14, N. of the General Conditions.)

h. Grass Fire Prevention

To reduce the potential for grass fires, all off-road driving shall be kept to a minimum during the grass fire season (starting June 1st and continuing until further notice). Each vehicle driving off-road or to remote locations, shall carry a portable fire extinguisher (10 pound ABC dry chemical, minimum), communications equipment consisting of a two-way radio or mobil phone (CB type radios are not acceptable) and a shovel. All fires shall be reported immediately to the nearest Hanford Patrol and the Hanford Fire Department.

i. Drilling Specification

All drilling work shall be accomplished as specified in Specification No. PNL-SOW.183-H and as directed in the field by the JAJ's representative.

j. Radiation Control Zone Work

Although radiation contamination is not anticipated, the work site is located within a Radiation Control Zone and all work in this zone shall be performed in accordance with paragraph SC-15, herein, and applicable Radiation Work Permits (see Paragraph SC-6., b., herein).

SC-10. SPECIAL LIMITATIONS, REQUIREMENTS AND WORKING CONDITIONS CONT.k. Drilling Crew Qualifications/Experience

All drillers shall be licensed in the State of Washington and have a minimum of five years cable tool drilling experience using both drive barrel and hard tools. In addition, each driller shall have experience in radiological and/or hazardous waste drilling and monitoring well construction. The Contractor shall provide a complete list of drillers and helpers involved and enter those present in the drilling log.

1. Expediting the Work

The Contractor shall expedite the contract work as necessary (including employment of sufficient drilling rigs and crew, and working multiple shifts or overtime, if required) to assure completion of all work within the times specified. (See Paragraph SC-4., a.)

SC-11. ESTIMATED QUANTITIES

The quantities of unit price items listed below and in the Schedule of Unit Price Items are estimates only and may increase substantially as stated in paragraph SC-20, herein. The Contractor will be required to complete the work specified in accordance with the contract unit prices whether it involves quantities greater or less than the following estimates:

<u>Item No.</u>	<u>Description</u>	<u>Unit</u>	<u>Estimated Quantity</u>
1.	Drill hole for 12" casing.	LF	200
2.	Drill hole for 10" casing.	LF	1,320
3.	Furnish 12-inch casing.	LF	200
4.	Furnish 10-inch casing.	LF	840
5.	Furnish 12-inch drive shoe.	EA	3
6.	Furnish 10-inch drive shoe.	EA	7
7.	Install and pull 12-inch casing.	LF	200
8.	Install and pull 10-inch casing.	LF	1,520

SC-11. ESTIMATED QUANTITIES CONT.

<u>Item No.</u>	<u>Description</u>	<u>Unit</u>	<u>Estimated Quantity</u>
9.	Furnish 6-inch SS casing.	LF	1,230
10.	Install 6-inch SS casing.	LF	1,230
11.	Furnish 10-inch SS well screen.	LF	130
12.	Furnish 6-inch SS well screen.	LF	215
13.	Install 10-inch SS well screen.	LF	130
14.	Install 6-inch SS well screen.	LF	215
15.	Furnish and place Bentonite, powder and granular type.	CU FT.	320
16.	Furnish and place Bentonite, pellet type.	CU FT	30
17.	Furnish and place sand pack.	CU FT	110
18.	Furnish and place concrete.	CU FT	65
19.	Furnish and install brass survey marker.	EA	16
20.	Furnish and install locking well cap.	EA	16
21.	Furnish and install steel posts (4" dia. x 6').	EA	64
22.	Special work.	CREW HOUR*	280
23.	Crew standby time.	CREW HOUR*	40
24.	Equipment standby time.	EQUIP. HOUR*	40

* Or pro rata fraction thereof for any fraction of an hour.

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SC-12. MEASUREMENT AND PAYMENT

It is mutually agreed that the contract price for the following items as described in Paragraph SC-11 and in the Schedule of Unit Price Items, shall be full compensation for furnishing materials, equipment and labor, and for other expenses incidental to this contract for constructing wells, in accordance with the requirements of the specifications, and no further compensation of any kind or description will be made.

a. Drilling Hole

Measurement for drilling hole for casing (10-inch and 12-inch diameter) will be made on a linear foot basis for the actual depth of acceptable hole drilled. Payment will be made at the applicable contract unit price per linear foot (Items No. 1 and 2), which price shall include all drilling, drilling logs, steam cleaning of equipment, straightness test (including furnishing pipe for tests), and any other costs incidental to the drilling work and not included in other payment items.

b. Furnishing Casing

Measurement for furnishing casing (6-inch, 10-inch and 12-inch diameter) will be made on a linear foot basis for casing furnished as specified and accepted in-place in the well or backpulled (where specified). Payment will be made at the applicable contract unit price per linear foot (Items No. 3, 4 and 9), which price shall include furnishing the casing, steam cleaning the casing where specified, painting exposed casing, and any other costs incidental to the casing and not included in other payment items. The 10-inch and 12-inch casing which is to be backpulled and reused shall remain the property of the Contractor.

c. Drive Shoes

Measurement for drive shoes (10-inch and 12-inch) will be based on the actual number of drive shoes furnished, as required. Payment will be made at the applicable contract price each (Items No. 5 and 6), which price shall include furnishing each shoe, machining 10-inch shoe (if necessary to fit through 12-inch casing) and any other costs incidental thereto and not included in other payment items.

d. Install and Pull 10-Inch and 12-Inch Casing

Measurement for installing and pulling 10" and 12" diameter casing will be made on a linear foot basis for casing installed and backpulled as specified. Payment will be made at the applicable contract unit price per linear foot (Items No. 7 and 8), which price shall include cutting and welding, installing

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SC-12. MEASUREMENT AND PAYMENT CONT.

drive shoe and casing, backpulling and any other costs incidental to the 10" and 12" casing work and not included in other payment items.

e. Install 6-Inch SS (Stainless Steel) Casing

Measurement for installing 6-inch SS casing will be made on a linear foot basis for the casing specified and accepted in-place in each well. Payment will be made at the contract unit price per linear foot (Item No. 10), which price shall include installing and any other costs incidental to casing work and not included in other payment items.

f. Furnish 6-Inch and 10-Inch SS (Stainless Steel) Well Screen

Measurement for furnishing 6-inch and 10-inch SS well screens will be made on a linear foot basis for screen specified and accepted in-place in the wells. Payment will be made at the applicable contract unit price per linear foot (Items No. 11 and 12), which price shall include furnishing and any other cost incidental thereto and not included in other payment items.

g. Install 6-Inch and 10-Inch SS Well Screen

Measurement for installing 6-inch (pipe size) and 10-inch (telescope size) SS well screen will be made on a linear foot basis for the well screen specified and accepted in-place in each well. Payment will be made at the applicable contract unit price per linear foot (Items No. 13 and 14), which price shall include installing the well screen and any other costs incidental to the well screen work and not included in other payment items.

h. Furnish and Place Bentonite, Sand Pack and Concrete

Measurement for furnishing and placing bentonite, sand pack and concrete will be made on a cubic foot (CU FT) basis for the actual volume of bentonite, sand pack and concrete placed in accordance with the specifications or as directed by the JAJ. Payment will be made at the applicable contract unit price per cubic foot (CU FT) (Items No. 15, 16, 17 and 18), which price shall include furnishing the materials, labor and equipment for mixing/placing, and any other costs incidental to the bentonite, sand pack and concrete work which are not included in other payment items.

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SC-12. MEASUREMENT AND PAYMENT CONT.

i. Furnish and Install Brass Survey Marker

Payment will be made at the contract unit price for each brass survey marker installed as specified and accepted in-place (Item No. 19), which price shall include furnishing and installing.

j. Furnish and Install Locking Well Cap

Payment will be made at the contract unit price for each locking well cap installed as specified and accepted in-place (Item No. 20), which price shall include furnishing, installing and painting the well cap.

k. Furnish and Install Steel Posts (4" dia. x 6')

Payment will be made at the contract unit price for each 4" diameter x 6' long steel post installed as specified and accepted in-place (Item No. 21), which price shall include furnishing, installing and painting the post. (Furnishing and placing of concrete for setting the posts is included in Item No. 18 -see foregoing subparagraph h..)

l. Special Work

Payment will be made at the contract unit price for special work on a crew hour (or pro rata fraction of any hour) basis, (Item No. 22). Special work shall include (but shall not be limited to) all labor and equipment for developing the wells, aquifer testing, performing split spoon or Shelby tube sediment sampling, work not included in other payment items, and other items not covered in the specifications which may be as directed in the field by the JAJ. Payment will be made for each crew hour spent in the performance of special work by the required drilling crew and equipment as directed in the field by the JAJ.

m. Crew Standby Time

Payment will be made at the contract unit price for crew standby time on a crew hour (or pro rata fraction thereof for any fraction of an hour) basis, (Item No. 23). Crew standby time shall be interpreted (and paid for) as idle time spent at the work site by the Contractor's drilling crew, as directed by the JAJ, but not to exceed four (4) consecutive hours in one working day (each crew.)

SC-12. MEASUREMENT AND PAYMENT CONT.

n. Equipment Standby Time

Payment will be made at the applicable contract price for equipment standby time on an equipment hour (or pro rata fraction thereof for any fraction of an hour) basis, (Item No. 24). Equipment standby time shall be interpreted (and paid for) as idle time spent at the work site during the working day by the Contractor's drilling equipment, as directed by the JAJ.

SC-13. REVISIONS AND INTERPRETATIONS OF SPECIFICATION No. PNL-SOW.183-H

Specification No. PNL-SOW.183-H as listed in Paragraph SC-6 herein, is revised and interpreted as follows:

a. In General

The "PNL Geologist" shall be considered to be a representative of the JAJ for purposes of field direction specifically detailed in the specification. In all other cases where the term "PNL" is used, it shall mean "JAJ".

b. Section 1.0, Paragraph 1.3, on Page 1

The dates indicated in this paragraph are approximate and are subject to change. Commencement and completion of the contract work shall be as stated in Paragraph SC-4. of these Special Conditions.

c. Section 2.0, on Page 4

The following paragraph is added after Paragraph 2.1:

"2.2 Welding Requirements

Personnel and procedures for welding carbon steel casing shall have been qualified in accordance with AWS D1.1 before welding. Qualification in accordance with ASME Section IX may be substituted for this requirement.

Perform welding of carbon steel casings in accordance with AWS D1.1.

Visual weld examination acceptance criteria shall meet the requirements of AWS D1.1, paragraph 6.5.5."

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SC-14. WORKMEN'S COMPENSATION

The coverage afforded by the Workmen's Compensation statutes of the State of Washington (Title 51, Revised Code of Washington) shall, for performance, at the Hanford Site, of all work, including work subcontracted, specified by this contract be subject to the following:

- a. Except as provided in subparagraph f. below, the Contractor shall be relieved of all obligation to pay premiums for such coverage, the DOE having agreed, under the terms of a contract with the Department of Labor and Industries of the State of Washington (hereinafter called the "Department"); to bear the actual cost of such coverage.
- b. The Contractor shall submit to the JAJ, for transmittal to the Department, such payroll records, in duplicate, as are required by the said statutes, except as provided in subparagraph f. below.
- c. The Contractor shall, for coverage of each individual employer or any member or officer of any corporate employer provided for by section 51.32.030 of the Revised Code of Washington, submit to the JAJ for transmittal to the Department the written notice required by that section.
- d. The Contractor shall submit to the JAJ, for transmittal to the Department, the accident reports provided for by Section 51.28.010 of the Revised Code of Washington.
- e. The Contractor shall take such action, and only such action, as the JAJ requests in connection with any such accident reports, including assistance in the investigation and disposition of any claims thereunder and subject to the direction and control of the JAJ, the conduct of litigation in the Contractor's own name in connection therewith: Provided, that the JAJ shall reimburse the Contractor for all reasonable expenses, including attorney's fees, incurred by the Contractor in connection with any such action taken at the JAJ's request.
- f. The Contractor shall be responsible for making all payment and submitting all reports required by Title 51, Section 51.32.073, Revised Code of Washington.

SC-15. SPECIAL RADIOLOGICAL CONDITIONS

All work which is performed or scheduled to be performed by the Contractor within a radiation zone shall be in accordance with the following provisions:

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SC-15. SPECIAL RADIOLOGICAL CONDITIONS CONT.

a. Radiological Control

The Contractor shall insure that all persons under its control, comply with the regulations and procedures pertaining to control of radiation and/or contamination which are set out or provided for herein or in other provisions of the contract, including applicable Radiation Work Permits. A copy of the Radiation Work Permit shall be posted at work site before work begins.

b. Allowable Exposure Limits

It is expected that each individual will be permitted to work in a radiological zone a minimum of forty (40) hours during any seven (7) consecutive days without exceeding the established permissible limits of radiation as specified in DOE Order 5480.1, Chapter XI. The average dose rate to workers shall not exceed 2.0 mrem/hour or a cumulative of 80 mrem per week. The Contractor shall manage the work to insure the limit (80 mrem per week) is not exceeded. The Contractor shall be responsible for being aware of each employee's current radiation exposure status before assigning radiation zone work and for controlling each of his employee's exposure to ionizing radiation below 3000 mrem per calendar year.

Individuals under 18 years of age shall be restricted from radiation zones.

In any case where the external exposure status of an individual becomes uncertain or when administrative controls have been exceeded due to an unplanned amount of radiation dose, the individual(s) involved shall be removed from further radiation work.

All exposures to radiation shall be maintained as low as reasonably achievable.

c. Modification of Regulations

The JAJ may modify or change regulations pertaining to Radiation Zone exposure limits, boundaries, permissible exposure rates, protective clothing, and exposure time of personnel. The JAJ may require the Contractor to perform work by a specific method or to change from methods contemplated under this contract. If such changes cause an increase or decrease in the Contractor's cost of or time required for performance of the work, an equitable adjustment shall be made in accordance with the procedure applicable to changes in the drawings and specifications set out in ARTICLE 36., CHANGES, of the Contract General Provisions.

SC-15. SPECIAL RADIOLOGICAL CONDITIONS CONT.

d. Suspension of Work

The JAJ may require suspension of all or part of the work in progress if unfavorable radiation control practices or conditions are detected, such as the following:

- o Potential of contamination resulting from excessive winds or uncovering of surface contamination.
- o Increase of working personal dose rates above anticipated levels resulting from inadequate control of process control factors or other unanticipated problems beyond the control of the Contractor.
- o Non-compliance with Radiation Controls/Procedures or potential of contamination resulting from poor work practices by the Contractor.

Work will not be resumed until a satisfactory resolution is determined by the JAJ after consultation with the Contractor and Radiation Control representatives.

If the conditions requiring such suspension of work are beyond the control of the Contractor and such conditions cause an increase or decrease in the Contractor's cost of or time required for performance of the work, an equitable adjustment shall be made in accordance with the procedure applicable to changes in the drawings and specifications set out in ARTICLE 5., SUSPENSION OF WORK, of the Contract General Provisions.

e. Radiological Training and Medical Examinations

- (1) The Contractor shall require all persons under its control to attend an orientation session prior to their initial entry into a Radiation Zone. Orientation sessions require approximately three hours each and will be conducted by the JAJ at 9:30 a.m. and 1:30 p.m. on Monday through Friday, at Building No. 1264, in the 3000 Area, approximately 4 miles from Richland, Washington.
- (2) Medical examinations shall be required for all employees who will be entering/working in the radiation zone. Medical exams include providing radiation exposure history, physical exam, whole body radiation count (final whole body radiation count requirement may be omitted, subject to the determination of the JAJ) and respiratory mask fitting.

SC-15. SPECIAL RADIOLOGICAL CONDITIONS CONT.

Medical examinations will require approximately eight hours per individual and will be provided by the JAJ as requested by the Contractor at least two days prior to the desired time.

- (3) All time spent by Contractor's employees in orientation, Supervisor radiation training and medical examinations shall be at the expense of the Contractor.

f. Control of Personnel Entering a Radiation Zone

Unless otherwise directed by the JAJ, the Contractor shall not permit any person under its control to enter a Radiation Zone unless a JAJ representative is present to specify the protective clothing and radiation instruments to be used, to provide radiation monitoring services, and to provide any other necessary service with respect to control of radiation and/or contamination.

g. Furnishing of Protective Clothing

All protective clothing required by Contractor personnel for work inside Radiation Zones will be furnished at the jobsite by the JAJ.

h. Use of Protective Clothing, Personal Items and Dosimeters

- (1) All persons working in or entering the Radiation Zone will be required to wear protective clothing, as stated in the Radiation Work Procedure. Removal of outer personal clothing may be required.
- (2) Personal items normally worn and/or carried in clothing pockets shall be removed prior to entering/working in the Radiation Zones. These items include watches, rings, jewelry, keys, knives, etc.
- (3) All persons will be required to carry, in the prescribed manner, dosimeters while within the Radiation Zone. (Refer to Radiation Work Procedure.) NOTE: Dosimeters shall be exchanged on a quarterly basis. The Contractor's personnel shall cooperate with the JAJ during the time required for the exchange of dosimeters and for weekly gamma pencil dosimeter readings.

SC-15. SPECIAL RADIOLOGICAL CONDITIONS CONT.

i. Control of Personal Habits

The Contractor shall require all persons under its control to comply with regulations forbidding anyone to eat, drink, smoke or perform any act involving the transfer of any item from the hands to the body while within a Radiation Zone. Personnel will be allowed to smoke, drink and use toilet facilities in a designated area only upon the removal of the outer layer of protective clothing (if two layers of protective clothing are required) and completion of a radiation survey for possible contamination. Personnel will not be allowed to eat food of any type within the radiation zone. Food may be consumed outside of the radiation zone only after complete removal of ALL protective clothing and the completion of a radiation survey for possible contamination.

j. Temporary Construction Facilities

The Contractor shall locate its offices, latrines, lunchroom and all other facilities not essential within a Radiation Zone, in areas designated or approved by the JAJ outside of the Radiation Zone.

k. Control of Personnel Leaving Radiation Zone

The JAJ will survey all persons leaving a Radiation Zone for possible contamination. This survey will require approximately one (1) to five (5) minutes per person per exit. The JAJ will periodically survey all Contractor personnel for possible contamination whether or not Radiation Zones are established within the Contractor's work area. Any decontamination services required will be performed by the JAJ.

l. Decontamination of Individuals

Should contamination be detected on a person being surveyed, he will be properly decontaminated. All decisions regarding extent of contamination and control measures to be applied will be made by the JAJ.

m. Disposition of Contaminated Personal Property

- (1) The Contractor agrees to submit to the JAJ for survey and decontamination if necessary and for destruction or other disposal if the JAJ should determine that decontamination is impracticable, any equipment, tools, or other personal

SC-15. SPECIAL RADIOLOGICAL CONDITIONS CONT.

property brought into the Hanford Controlled Access Area by the Contractor, its employees, and any subcontractor and its employees.

- (2) The necessary survey for detection of contamination will be performed immediately prior to the removal of any property from a Radiation Zone and may also be performed before the movement of any such property from any location within the Hanford Controlled Access Area.
- (3) An equitable adjustment, excluding profit, in the contract price will be made for all work performed by the Contractor, at the direction of the JAJ, in connection with decontamination of equipment. An equitable adjustment will also be made in the contract price for any personal property of the Contractor, its employees, and any subcontractor and its employees, lost as a result of contamination not due to their fault or negligence.

n. Control of Vehicle and Equipment Leaving Radiation Zone

The JAJ will survey all vehicles and equipment leaving a radiation zone, including small tools used on a daily basis within the zone. This survey will average approximately 30 minutes per vehicle per exit and approximately 10 minutes for small tools. A vehicle is defined as a truck, tractor backhoe, trailer, etc. Large or complex equipment may require a longer period of time for surveying. Vehicles entering the radiation zone shall be kept to a minimum.

o. Change Room and Location

If required, a change room will be provided for the Contractor's use during the tenure of the contract work. An existing change room facility (if available) near the work site will be provided; otherwise, a portable change room (trailer) will be provided by the JAJ.

SC-16. REVISION OF CONTRACT GENERAL PROVISIONS

- a. Article 16, "Equal Opportunity " paragraph (g), 10th line: After the word "JAJ" add the words "or DOE".
- b. Article 22, "Bonds", second line of Paragraph B.: "10 calendar days" is changed to "7 calendar days".
- c. Article 38, "Subcontractors", first line of paragraph: The number "30" is changed to read "10".

SC-16. REVISION OF CONTRACT GENERAL PROVISIONS CONT.

- d. Article 40, "Termination for Convenience", paragraph (e), (1), (iii), first and second lines: The words "pursuant to Federal Regulations: is changed to read: "pursuant to Section 1-8.303 of the Federal Regulations (41 CFR 1-8.303)".

SC-17. REVISION OF CONTRACT GENERAL CONDITIONS

- a. The following listed portions of the General Conditions are not applicable to the contract work and shall be disregarded:

- (1) GC-16, "Submission of Drawings and Vendor Information",
- (2) GC-19, "JAJ-Furnished Property".

- b. Paragraph GC-3, "Insurance", is changed to read as follows:

"GC-3 INSURANCE

- A. The Contractor shall maintain insurance in at least the following amounts: Comprehensive General Liability Insurance for bodily injury, including death, and/or property damage - \$500,000 each occurrence; Comprehensive Automobile Liability Insurance for bodily injury, including death, and/or property damage - \$500,000 each occurrence. The referenced Comprehensive General Liability policy shall incorporate acceptable endorsements covering blanket contractual liability and broad form property damage. Certificates of such insurance shall be furnished the JAJ and shall be subject to the approval of the JAJ. Provisions shall be made in such insurance and certificates for ten (10) days advance written notice by mail by the insurer to the JAJ of changes in or cancellation of such insurance.

- B. The JAJ shall be designated as an additional named insured, for purposes of this contract, in all policies required by this paragraph. Upon request of the JAJ, the Contractor shall furnish a copy of all such policies, in a form satisfactory to the JAJ, assuring compliance with this requirement. It is specifically agreed that this paragraph shall create neither an employment nor an agency relationship between the JAJ

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SC-17. REVISION OF CONTRACT GENERAL CONDITIONS CONT.

and the Contractor. The Contractor shall remain and is an independent contractor and a wholly individual commercial enterprise."

- c. Refer to Paragraph GC-6., D., 2.: In the second line, change "from 7:00 a.m. to 12 noon" to read "from 7:00 a.m. to 12 noon and from 12:30 p.m., to 3:00 p.m.".

- d. Paragraph GC-7, A. is changed to read as follows:

"A. The telephone system at the Hanford Site is operated by General Telephone Company of the Northwest, Inc. Upon request of the Contractor, the JAJ will arrange for installation of a telephone line and receptacles for telephone service at the construction offices of the Contractor and its subcontractors, if facilities for such services are available. Telephone instruments shall be provided by the Contractor. The JAJ will charge the Contractor for installation and services in accordance with the charge assessed by General Telephone Company. Those charges will be determined on the basis of published tariffs. Information on tariffs may be obtained from the DOE's Site Services Contractor, office of the Manager of the Plant Telephone and Radio, Telephone 376-6322."

- e. Refer to Paragraph GC-10.

(1) G. 2.: Change Article 24 to read Article 34.

(2) Subparagraph H.: The following is added to the end of the sentence:

"See Attachment B, "Hazardous Materials Handling Requirements (non-radioactive)".

- f. Refer to Paragraph GC-13., A.: The following is added at the end of the paragraph:

"However, the Contractor shall not store equipment or materials on premises adjacent to the site of the work except in strict accordance with the prior written approval of the JAJ."

- g. Refer to Paragraph GC-14., N. 2.: Change the reference to GC-12, B. to read GC-15., B.

SC-17. REVISION OF CONTRACT GENERAL CONDITIONS CONT.

h. Paragraph GC-15, A. is changed to read as follows:

"A. WORKING HOURS

1. Working hours for the Contractor will normally be between the hours of 8:00 a.m. and 4:30 p.m., excluding Saturdays, Sundays and holidays. If the Contractor desires to work during periods other than above, three days advance written notification must be given to the JAJ. The notice shall include the type of work to be performed, location of work, date and hours of work, and description of any heavy equipment to be used.
2. The Contractor shall give the JAJ at least two hours notice if its employees are to be working an extended shift in order to complete a scheduled work item; i.e., concrete pour, electrical tie-in, etc. JAJ approval shall be required prior to performance of any work by the contractor during hours other than those stated in the foregoing paragraph."

SC-18. INDEMNITY

Contractor agrees to defend, indemnify and hold harmless J. A. Jones Construction Services Co. and Battelle Memorial Institute, including any affiliated companies or organizations with which any or all of the aforementioned organizations may have, retain or acquire any interest whatsoever, from and against any claim, cost, expense or liability (including attorneys' fees), attributable to any bodily injury, sickness, disease or death, or to damage to or destruction of property caused by, arising out of, resulting from or occurring in connection with the performance of the work by Contractor, its subcontractors, or their agents or employees; whether or not caused in part by the active or passive negligence or other fault of a party indemnified hereunder; provided, however, Contractor's duty hereunder shall not arise if such injury, sickness, disease, death, destruction, or loss is caused by the sole negligence of a party indemnified hereunder. Contractor's obligation shall not be limited by the provisions of any workmen's compensation or similar act, and Contractor specifically agrees to waive any and all immunity provided by the Industrial Insurance Act, RCW Title 51 et. seq., as amended, and specifically agrees to defend, indemnify and hold harmless all parties indemnified under this provision from all potential or actual liability attributable to actions brought by, or on behalf of, the Contractor's own employees or agents and those employees or agents of any subcontractor or supplier at any tier whatsoever.

Appendix A

PNL-SOW.183-H

STATEMENT OF WORK
(SOW)

WELL DRILLING SPECIFICATIONS
183-H SOLAR EVAPORATION BASINS

July 15, 1986

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STATEMENT OF WORK

WELL DRILLING SPECIFICATIONS 183-H SOLAR EVAPORATION BASINS

July 15, 1986

1.0 GENERAL

1.1 Scope of Work

The purpose of this contract is to furnish all labor, equipment, and materials necessary to drill, install, develop, and test at least 16 and possibly up to 25 ground-water monitoring wells. Currently, 23 wells are planned (three clusters of three wells each and 14 single shallow wells). However, the number of single shallow wells may change as drilling progresses.

These wells are being drilled as part of the Revised Ground-Water Monitoring Plan for the 183-H Solar Evaporation Basins. Drilling and testing of these wells will provide additional hydrogeologic data, help determine the extent of low-level ground-water contamination, and help determine the rate of movement of trace levels of hazardous chemical wastes within the ground water.

1.2 Work Location

All drilling sites are located in the 100-H Area of the Hanford Site in the State of Washington, approximately 37 road miles north of Richland. Each well site is clearly marked and labeled in the field with a painted stake. Figure 1 is a map of the 100-H Area showing existing wells and proposed new well locations.

1.3 Drilling Schedule

Drilling for this contract shall be conducted in two phases. The first phase will consist of drilling 16 wells; seven single shallow wells (W1 through W7, Figure 1), and three well clusters (C1 through C3, Figure 1). Each cluster will consist of one shallow, one intermediate, and one deep well, approximately 25 feet apart from one another. Construction of the wells in this phase will commence August 1, 1986 and be completed on or before December 1, 1986.

Currently, seven single shallow wells (W8 through W14, Figure 1) are planned for the second phase of drilling. However, this number may change as drilling progresses. Construction of the wells in this phase will commence March 30, 1987 and be completed on or before May 29, 1987.

1.4 Working Hours

Work will be performed on a five-day work week schedule, Monday-Friday, between the hours of 8:00 a.m. and 4:30 p.m. The work will be done on consecutive working days over the period of the contract. Days not included

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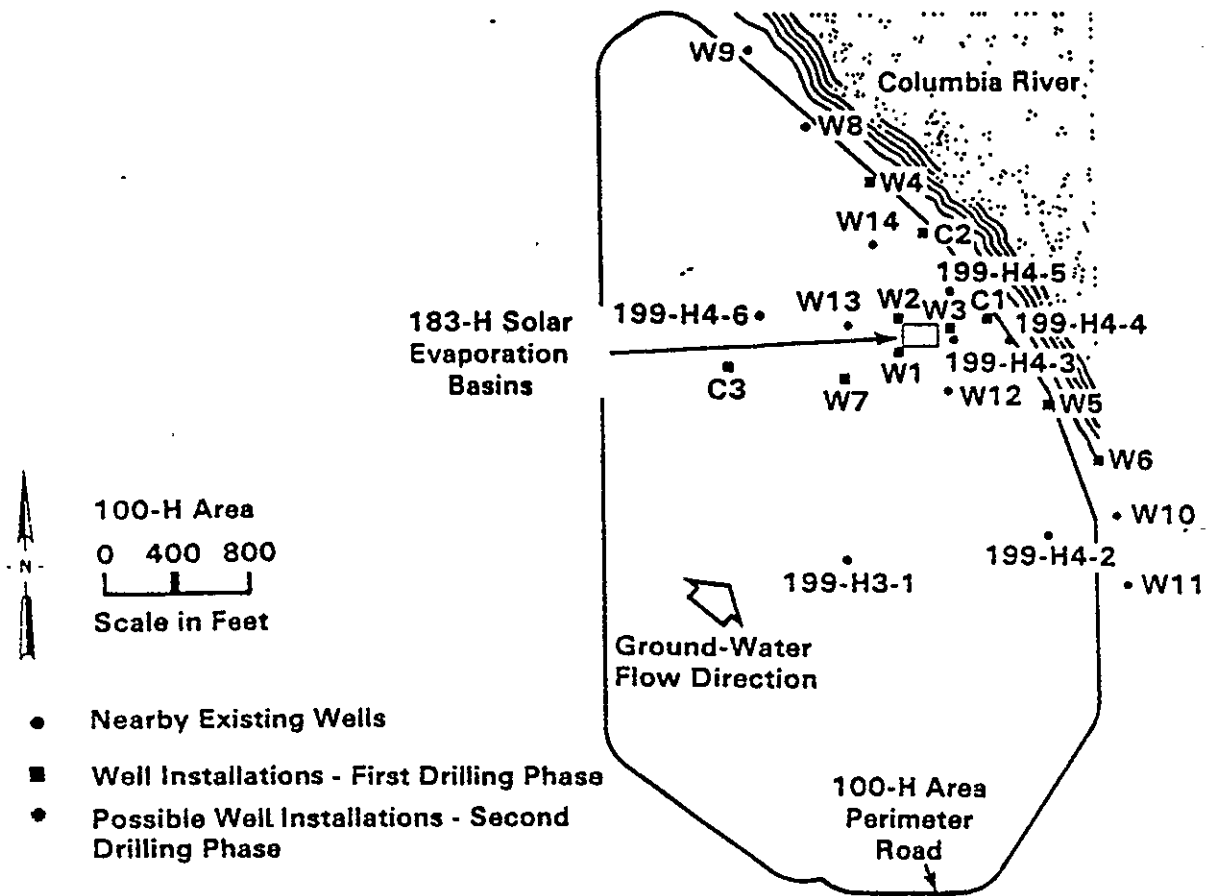


FIGURE 1. Well Location Map of the 100-H Area

in this schedule are those holidays observed by PNL staff. Scheduled holidays for the contract period are: September 1, November 27-28, 1986 and May 25, 1987. Exceptions may be made in the work schedule if mutually agreed upon by the contractor and PNL.

In the event that special tests (i.e., geophysical logging) must be performed during drilling operations, standby time will be paid. Standby time will be held to a minimum and is estimated to be 40 hours during the period of this contract. The PNL geologist and driller will both sign and date the drilling log for approved standby time.

Downtime not specifically ordered by PNL will not be considered as standby time and no compensation will be made.

1.5 Equipment Required

The contractor is required to furnish all labor and equipment necessary to drill, install, develop, and test these wells as specified in sections 4, 5, and 6 of this contract, and as shown in the contract figures. These wells shall be drilled by the cable tool method using drive barrel and/or hard tools.

1.6 Materials Required

The contractor is required to furnish all well construction materials necessary to drill, install, develop, and test these wells as specified in sections 4, 5, and 6 of this contract, and as shown in the contract figures. Water used during the drilling operations shall be obtained from the 100 or 300 Area Fire Stations.

1.7 Contract Figures

The contract figures are not to scale and do not attempt to show exact details of well construction. Exact measurements such as completion depths, amount of materials used, joints, spacing, etc. shall be determined in the field by PNL.

1.8 As-Built Diagrams

As-built diagrams for each well will be maintained by the PNL geologist as the well is being drilled. Each diagram will be an accurate record showing well construction and completion. The contractor shall readily provide all information necessary to complete these diagrams.

1.9 Drilling Logs

The contractor shall keep a daily log of operations performed on each well. The log will be accurate and legible, with entries made in continuous, chronological order. The log shall contain the following: geologist, date, rig number, well number, depth at beginning of shift, depth at completion of shift, JAJ contract number, total casing (temporary and permanent), depth, drill method, wet/dry sample,

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lithologic description, time, drilling comments, and all other pertinent information for the completion of these wells. The log shall be complete, signed and dated by the driller and PNL geologist at the end of each day. The log shall be available to the PNL geologist upon request and after completion of each well. Drilling logs will be furnished by PNL. Figure 2 is an example drilling log.

1.10 Site Geology

The contractor should anticipate drilling in unconsolidated to consolidated materials, consisting of clay, silt, sand, gravel, cobbles, and boulders. These materials were deposited in former river channels and may be cemented, forming hardened layers of variable thickness. Low levels of radiological and chemical contamination may be encountered during drilling. PNL will provide routine monitoring of the drill cuttings and fluids penetrated in each borehole.

2.0 QUALITY ASSURANCE

2.1 Qualifications of Drillers

All drillers shall be licensed in the State of Washington and have a minimum of five years cable tool drilling experience using both drive barrel and hard tools. In addition, each driller shall have experience in radiological and/or hazardous waste drilling and monitoring well construction. The contractor shall provide a complete list of drillers and helpers involved and enter those present in the drilling log.

2.2 Compliance with Specifications

All wells shall be constructed and completed in accordance with Chapter 173-160 WAC, "Minimum Standards for Construction and Maintenance of Water Wells," and the specifications contained herein. Any changes or modifications made to these specifications must be approved by the PNL geologist.

As required during and after construction of each well, the contractor shall furnish proof acceptable to PNL (i.e., copies of receipts) that the quality of materials used for construction and installation of the monitoring wells equals or exceeds all requirements specified for this work.

In the event such proof is not acceptable to PNL, the contractor may be required to remove or replace those unacceptable items with material meeting the specified requirements. In such case, the contractor shall repair all damage caused in the removal and replacement at no additional cost to PNL.

2.3 Well Site Inspections

The PNL geologist shall be present at all times and will perform the Title III inspection and any other duties necessary to ensure the proper installation of

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FIGURE 2. Example Drilling Log

the monitoring wells in strict accordance with all specifications contained in this contract.

2.4 Well Abandonment

If, in the judgement of the PNL geologist, the well should be abandoned for whatever reason, the contractor will be instructed in writing, to abandon and backfill the hole. If well abandonment is deemed necessary as a result of contractor negligence, the contractor shall be held responsible for all replacement costs.

3.0 PREPARATIONS

3.1 General

The reliability of ground-water samples analyzed for hazardous chemical wastes are known to be affected by drilling methods and equipment used. Therefore, the following precautions must be taken before and during drilling operations:

A. Drilling Method

Drilling shall be done by the cable tool method. Drive barrel will be used where possible above the water table. Hard tools shall be used thereafter.

B. Steam Cleaning

Drill rig and peripheral equipment (i.e., drill tools, cables, etc.) shall be steam cleaned before coming on site. No detergents shall be used with the steam. In addition, the contractor shall steam clean the drill rig and all equipment, including the backpulled 10-in. and 12-in. casings, between wells (onsite). The contractor shall provide and maintain the steam cleaning equipment.

C. Storage of Construction Materials

The contractor shall use all means necessary to protect well construction materials before, during, and after installation. All materials shall be kept off the ground on stands, racks, or sawhorses. During vehicle transport, all materials shall be enclosed in the containers in which they were shipped.

D. Tool Lubricants

The contractor shall use only inorganic lubricants approved by PNL for assembling tool strings.

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E. Drilling Additives

With the exception of water, no drilling additives will be allowed. Any water used during drilling operations shall be obtained from the 100 or 300 Area Fire Stations.

F. Drill Cutting and Water Disposal

Drill cuttings from the saturated and-unsaturated zones shall be disposed of by spreading and leveling in the vicinity of the well bore. Water pumped from the wells during development shall be disposed of in the vicinity of the well bore. Water pumped from the wells during aquifer testing shall be discharged a minimum of 1000 ft away from the well bore, other wells in the vicinity, and the Columbia River. In the event contaminated materials and/or water are encountered, disposal shall be performed in accordance with PNL Industrial Health and Safety requirements.

4.0 CONSTRUCTION MATERIALS

4.1 Carbon Steel Casing and Drive Shoe (12-in.)

Initially, carbon steel casing and drive shoe shall be new, 12-in. nominal diameter material, free from pits or breaks. The pipe shall be Schedule 40, meeting ASTM A53 Specification. The individual segments of 12-in. carbon steel casing shall have straight beveled cuts and will be welded together.

4.2 Carbon Steel Casing and Drive Shoe (10-in.)

Initially, carbon steel casing and drive shoe shall be new, 10-in. nominal diameter material, free from pits or breaks. The pipe shall be Schedule 40, meeting ASTM A53 Specification. The individual segments of 10-in. carbon steel casing shall have straight beveled cuts and will be welded together. The contractor shall machine the 10-in. drive shoe down, if necessary, to allow the shoe to pass through the 12-in. casing.

4.3 Stainless Steel Screen (10-in. telescope size)

Stainless steel screen shall be new, 10-in. telescope size, Type 304 stainless steel. The screens shall be of the continuous slot, wire-wound design with flat stainless steel plates welded to the bottom. The contractor is to determine slot size by a sieve analysis, with final slot size to be based on a 50 percent pass through. Determination of slot size must be reviewed and approved by PNL. The screens shall be factory cleaned and separately wrapped in protective polyethylene for shipment.

4.4 Stainless Steel Screen (6-in. pipe size)

Stainless steel screen shall be new, 6-in. pipe size, Type 304 stainless steel. The screens shall be of the continuous slot, wire-wound design with

flat stainless steel plates welded to the bottom. Slot size shall be 20 slot (.020-in.) screen for the shallow and intermediate wells, and 10 slot (.010-in.) for the deep wells. End fittings shall be double entry Stub ACME flush screw threads. The screens shall be factory cleaned and separately wrapped in protective polyethylene for shipment.

4.5 Stainless Steel Casing (6-in.)

Stainless steel casing shall be new, 6-in. nominal diameter, Type 304 stainless steel. The casing shall consist of Schedule 10 pipe with Schedule 40 couplings, meeting ASTM A312 or A778 Specification. End fittings shall be double entry Stub ACME flush screw threads. The casing shall be factory cleaned and separately wrapped in protective polyethylene for shipment.

4.6 Artificial Sand Pack

Artificial sand packs shall consist of kiln dried quartz (silica) sand, 10-20 U.S. sieve size for shallow and intermediate wells, and 20-40 U.S. sieve size for deep wells. The grains shall be rounded and spherical with a uniformity coefficient of less than 1.5.

4.7 Bentonite Pellet Seal

Bentonite pellet seals shall be composed of commercially available pellets that have a dry bulk density of 80 lb/ft³ and are 0.25 in. in diameter.

4.8 Bentonite Slurry Seal

Bentonite slurry seals shall be a mixture of bentonite and water, with a Marsh Funnel viscosity of 120 seconds.

4.9 Granular Bentonite Seal

Granular bentonite seals shall be composed of coarse granular bentonite crumbles, 8-20 mesh.

4.10 Concrete Seal and Pad

Each well shall be sealed from land surface to a depth of 5 ft with concrete. In addition, a 4-ft by 4-ft, 4-in. thick concrete pad shall be placed at the surface around the permanent well casing. Using 3/4-in. maximum size aggregate, the concrete shall have a minimum compressive strength of 3000 psi at 28 days, and 6-in. maximum slump. The contractor shall supply a brass survey marker to be visibly placed in the concrete pad. The surface of the survey marker shall be of sufficient size to be stamped with the well number and horizontal and vertical controls.

4.11 Well Cap

Each well shall have a locking, removable, stainless steel cap of nominal diameter 2 in. greater than the permanent casing diameter to provide for pump hardware.

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4.12 Protective Steel Posts

Four protective steel posts shall be concreted in the ground around each well. The posts shall be 4-in. nominal diameter and 6 ft in length, with 4 ft extending above ground.

4.13 Safety Paint

Each well casing, cap, and adjacent protective posts shall be painted safety yellow upon completion of the well.

5.0 HYDROLOGIC TESTING

5.1 Water Level Measurements

Once the water table has been reached, water level measurements will be made in each well at the start of each shift by the PNL geologist. PNL will supply all equipment for measuring water levels.

5.2 Ground-Water Samples

Once the water table has been reached, ground-water samples may be collected from various wells by PNL. PNL will supply all necessary ground-water sampling equipment.

5.3 Well Development

Each well will be developed by bailing, jetting, or other acceptable techniques as approved by PNL. At a minimum, each well shall be developed until it is cleared of sand and other fine grained material, as determined by the PNL geologist.

5.4 Aquifer Testing

Aquifer testing will be performed on some or all of the wells. These tests may include, but are not limited to: bailer, slug, step drawdown, 8-hr pumping, and 8-hr recovery tests. The contractor shall supply, install, and operate all aquifer testing equipment, which may include some or all of the following: pump, power source, flowmeter, and discharge line. The pump shall be capable of producing a yield of up to 750 gpm. A minimum of 1000 ft of discharge line will be required. PNL will supply equipment and personnel necessary for data collection.

6.0 DESCRIPTION OF WORK

6.1 Single Shallow Wells

All single shallow wells shall be completed in the Hanford gravels. Initially, each of these wells will be drilled to the top of the uppermost silt and clay

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layer of the Ringold Formation with 10-in. diameter carbon steel casing and drive shoe. As the wells are being drilled, samples of the materials penetrated will be collected at 5-ft intervals and at changes in lithology by the PNL geologist. Sample jars will be provided by PNL.

A straightness test will then be performed on each well. Each well must pass a 20-ft section of 8-in. diameter pipe over the entire depth. The 10-in. casing will then be pulled back and the hole backfilled to the completion depth, which will be determined by the PNL geologist as each well is being drilled.

A 10-ft section of 10-in. (telescope size) stainless steel screen shall then be installed at the bottom of each well. The 10-in. casing shall then be pulled back, forming a natural pack around the exposed 10-ft section of screen.

Each well will then be developed. A test pump will be installed and an aquifer test performed. Upon completion of the aquifer test and removal of the test pump, each well will be completed by installing a 15-ft section of 6-in. (pipe size) stainless steel screen inside the 10-in. screen.

The top of each 6-in. well screen shall be threaded to 6-in. diameter stainless steel casing. The stainless steel casing shall extend from the top of each well screen to 2 ft above the land surface.

An artificial sand pack will then be placed between the 6-in. and 10-in. screens, extending upward to 5 ft above the top of each 6-in. screen. A bentonite pellet seal shall be placed on top of the artificial sand pack, extending upward 5 ft. A granular bentonite seal shall extend from the top of the bentonite pellet seal to 5 ft below land surface. Placement of sand pack and seals shall be accomplished as the 10-in. casing is being removed. The method of placement for sand pack and seals shall be approved by the PNL geologist.

The remaining annular space between the 6-in. and 10-in. casings shall be sealed with concrete as the 10-in. casing is removed completely from the borehole. The surface of each well will then be sealed with a concrete pad.

A locking, removable stainless steel cap will then be placed on each well. Four protective steel posts will be concreted in the ground around each well and the casings, caps, and posts will be painted safety yellow.

Each well will then be redeveloped as needed. Upon completion, the borehole will be inspected by PNL with the Downhole Television System to ensure that the wells have been constructed according to specification. Figure 3 is a diagram showing the construction and completion of the single shallow wells.

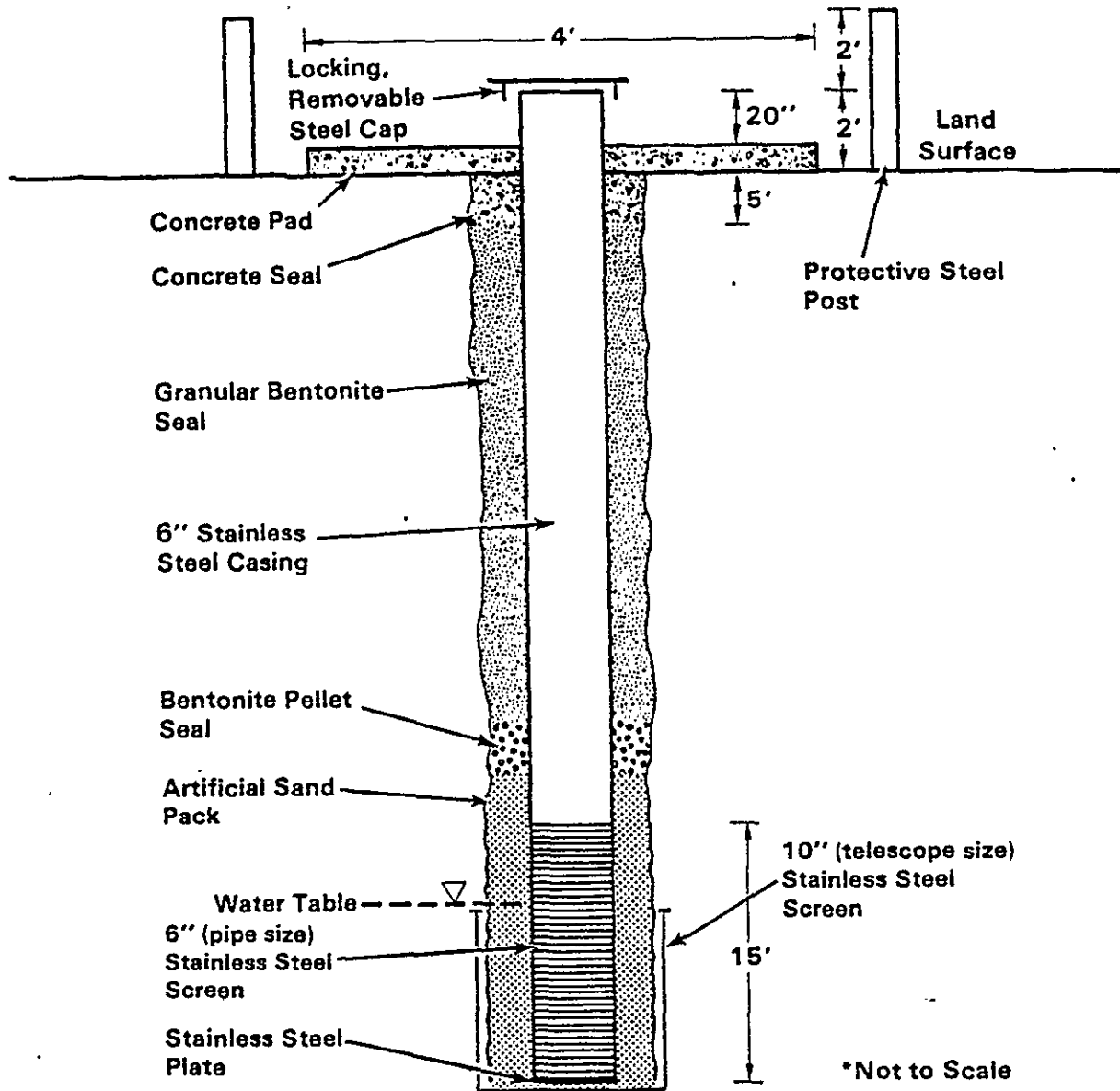


FIGURE 3. Single Shallow Wells Completed in Hanford Gravel

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6.2 Cluster Wells

A. General

Each cluster will consist of three wells, one shallow, one intermediate, and one deep well. The wells will be constructed 25 ft apart from one another as shown in Figure 4. The shallow cluster wells will be completed in the Hanford gravels, identical to each of the single shallow wells. The intermediate cluster wells will be completed at the top of the uppermost silt and clay layer of the Ringold Formation. The deep cluster wells will be completed within the Ringold clays.

B. Intermediate Cluster Wells

Figure 5 is a diagram showing the construction and completion of the intermediate cluster wells. These wells will be drilled to the top of the uppermost silt and clay layer of the Ringold Formation with 10-in. diameter carbon steel casing and drive shoe. As the wells are being drilled, samples of the materials penetrated will be collected at 5-ft intervals and at changes in lithology by the PNL geologist. Sample jars will be provided by PNL.

A straightness test will then be performed on each well. Each well must pass a 20-ft section of 8-in. diameter pipe over the entire depth. A 5-ft section of 10-in. (telescope size) stainless steel screen shall then be installed at the bottom of each well. The 10-in. casing shall then be pulled back, forming a natural pack around the exposed 5-ft section of screen.

Each well will then be developed. A test pump will be installed and an aquifer test performed. Upon completion of the aquifer test and removal of the test pump, each well will be completed by installing a 5-ft section of 6-in. (pipe size) stainless steel screen inside the 10-in. screen.

The top of each 6-in. well screen shall be threaded to 6-in. diameter stainless steel casing. The stainless steel casing shall extend from the top of each well screen to 2 ft above the land surface.

An artificial sand pack will then be placed between the 6-in. and 10-in. screens, extending upward to 5 ft above the top of each 6-in. screen. A bentonite pellet seal shall be placed on top of the artificial sand pack, extending upward to 5 ft above the water table. A granular bentonite seal shall extend from the top of the bentonite pellet seal to 5 ft below land surface. Placement of sand pack and seals shall be accomplished as the 10-in. casing is being removed. The method of placement for sand pack and seals shall be approved by the PNL geologist.

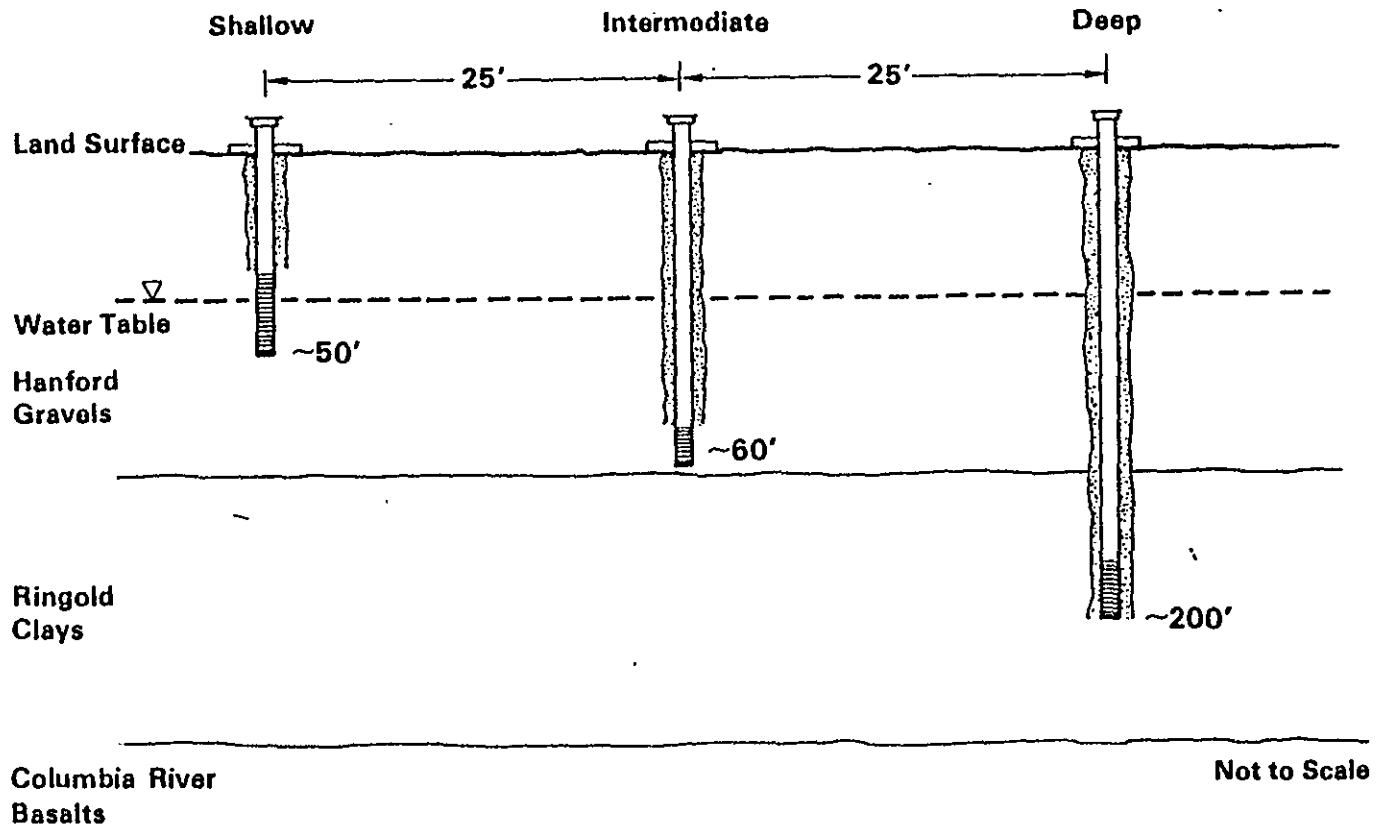


FIGURE 4. Cross Sectional View of Well Cluster Completion

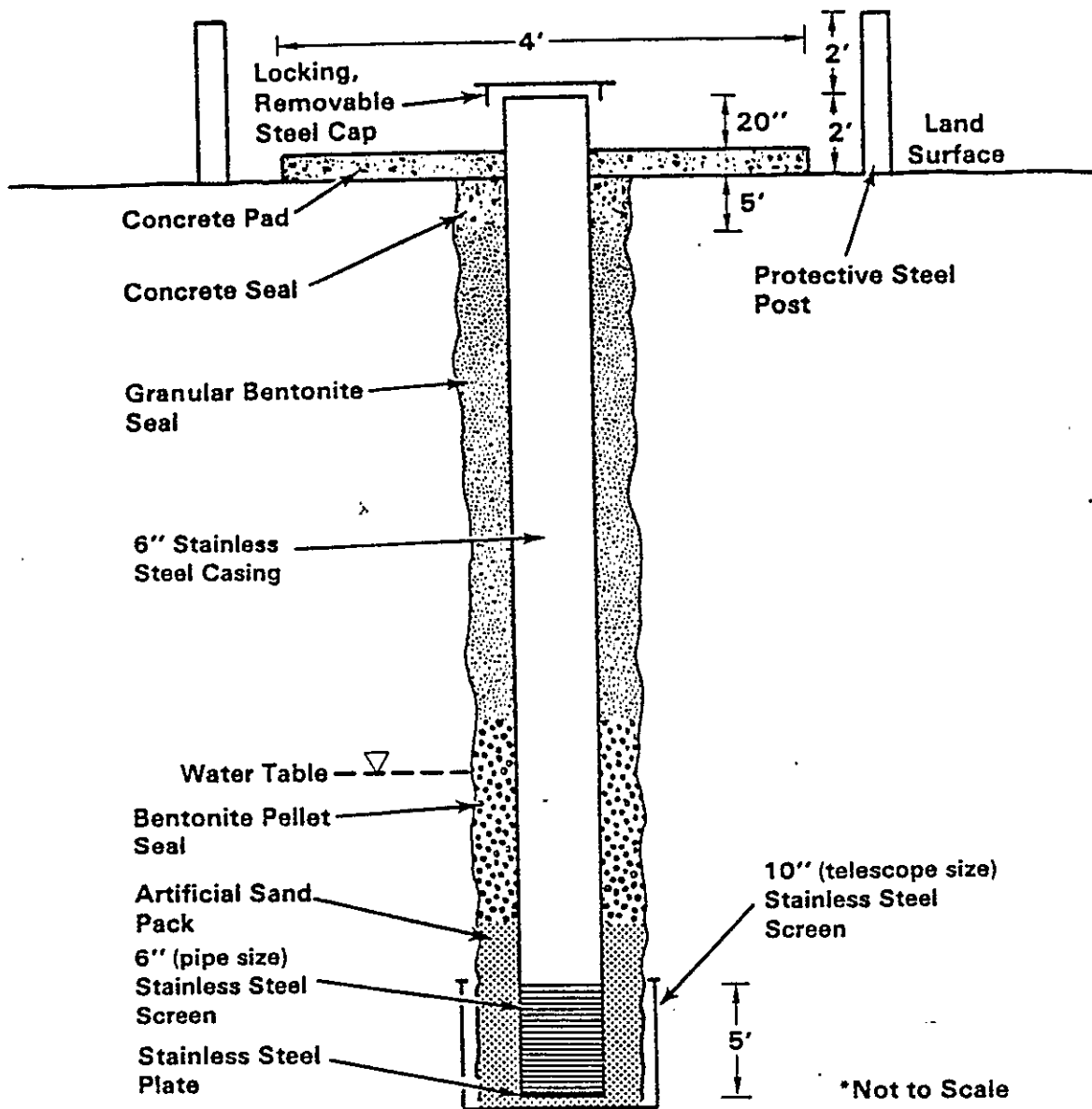


FIGURE 5. Intermediate Wells Completed at Top of Ringold Clays

The remaining annular space between the 6-in. and 10-in. casings shall be sealed with concrete as the 10-in. casing is removed completely from the borehole. The surface of each well will then be sealed with a concrete pad.

A locking, removable stainless steel cap will then be placed on each well. Four protective steel posts will be concreted in the ground around each well and the casings, caps, and posts will be painted safety yellow.

Each well will then be redeveloped as needed. Upon completion, the borehole will be inspected by PNL with the Downhole Television System to ensure that the wells have been constructed according to specification.

C. Deep Cluster Wells

Figure 6 is a diagram showing the construction and completion of the deep cluster wells. These wells will be completed within the Ringold clays. Each well will be drilled to the top of the uppermost silt and clay layer of the Ringold Formation with 12-in. diameter carbon steel casing and drive shoe. As the wells are being drilled, samples of the materials penetrated will be collected at 5-ft intervals and at changes in lithology by the PNL geologist. Sample jars will be provided by PNL.

The well will then be continued into the Ringold clays to the total depth with 10-in. diameter carbon steel casing and drive shoe. The total depth will be determined by the PNL geologist as each well is being drilled. Split spoon or Shelby tube sediment samples will be collected in any low permeability unit thought to be significantly retarding vertical ground-water movement.

A straightness test will then be performed on each well. Each well must pass a 20-ft section of 8-in. diameter pipe over the entire depth. A 10-ft section of 6-in. (pipe size) stainless steel screen shall then be installed at the bottom of each well.

The top of each well screen shall be threaded to 6-in. diameter stainless steel casing. The stainless steel casing shall extend from the top of each well screen to 2 ft above the land surface.

An artificial sand pack shall then be placed between the 6-in. screen and 10-in. casing as the casing is being pulled back. The sand pack shall extend from the bottom of the screen upward to 10 ft above the top of the screen. A bentonite slurry seal shall be placed on top of the artificial sand pack, extending upward to 5 ft above the water table. A granular bentonite seal shall extend from the top of the bentonite slurry seal to 5 ft below land surface. Placement of sand pack and seals shall be accomplished as the 10-in. and 12-in. casings are being removed. The method of placement for sand pack and seals shall be approved by the PNL geologist.

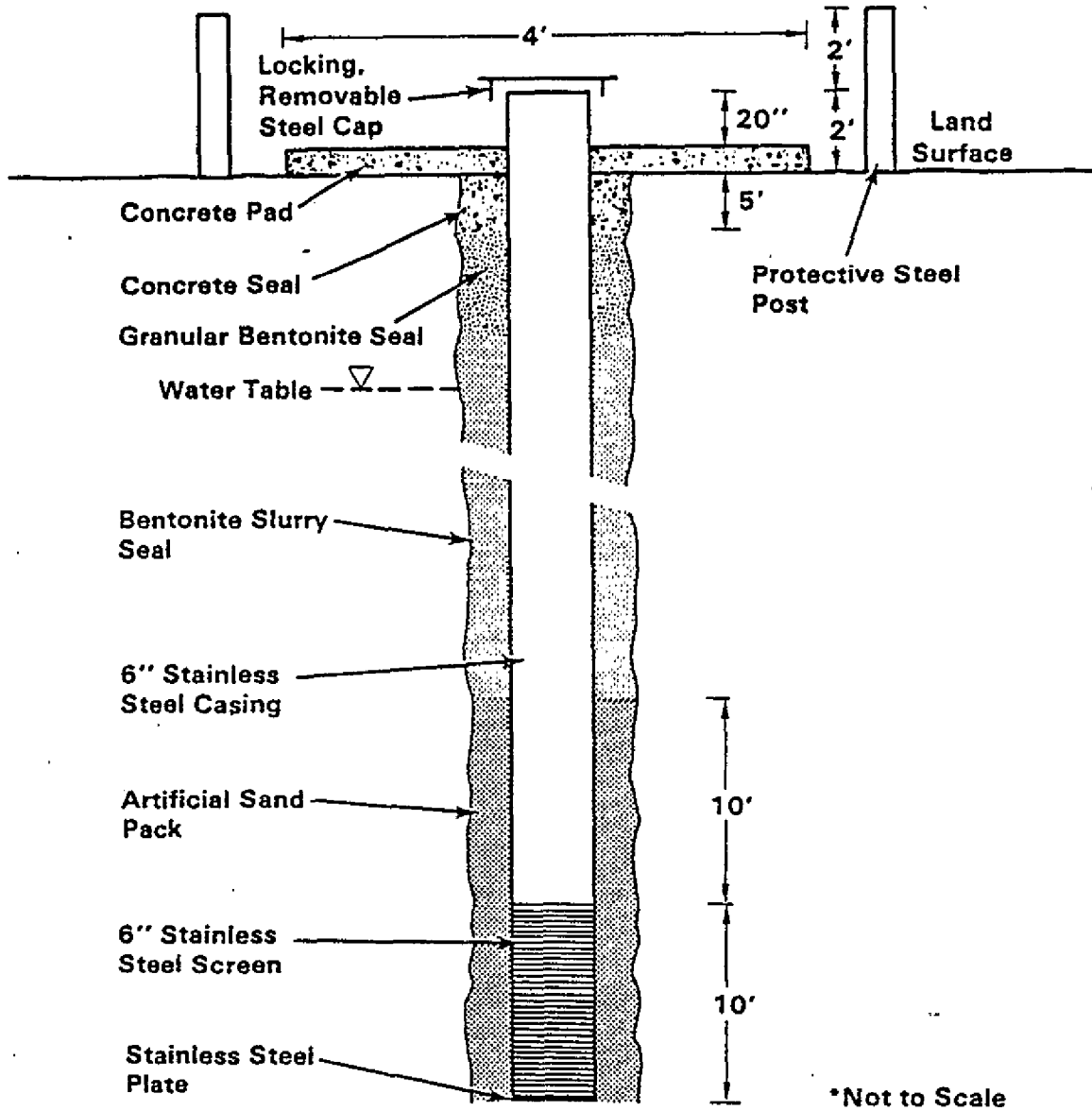


FIGURE 6. Deep Wells Completed Within Ringold Clays

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The remaining annular space between the 6-in. and 12-in. casings shall be sealed with concrete as the 12-in. casing is removed completely from the borehole. The surface of each well will then be sealed with a concrete pad.

A locking, removable stainless steel cap will then be placed on each well. Four protective steel posts will be concreted in the ground around each well and the casings, caps, and posts will be painted safety yellow.

Each well will then be developed. Upon completion, the borehole will be inspected by PNL with the Downhole Television System to ensure that the wells have been constructed according to specification.

Aquifer tests may then be performed on some or all of the deep cluster wells, as determined by the PNL geologist.

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Date July 14, 1986

To DISTRIBUTION

From LS Prater *High*Subject Tentative Agenda for Ground-Water Compliance Inspection

Denis Erickson and Will Abercrombie of the Department of Ecology are scheduled to visit Hanford on July 16 and 17 to conduct an annual inspection. I have developed a tentative agenda in accordance with the activities Denis specified. A DOE-RL official and I will act as escorts for the inspectors. The tentative agenda is given below for your information.

Wednesday, July 16

9:15 a.m. Inspectors arrive at Federal Building for badging

10:00 a.m. Meeting to review procedures and data
Sigma V, Nez Perce Room

12:00 p.m. Lunch

1:00 p.m. Depart for 100-H Area

1:30 - 3:00 p.m. Tour of 100-H Area (183-H basins and new well locations)

3:00 p.m. Depart for NRDW Landfill

3:30 p.m. Site walk-through (drilling activities)

Thursday, July 17

7:00 a.m. Pick up inspectors at Federal Building

7:30 - 10:30 a.m. 300 Area Trenches (routine sampling and new well locations)

10:30 a.m. Depart for 200E Area

11:00 - ^{12:30}~~12:00~~ p.m. *Tour (2750 lobby) of Burial Grounds*
~~Technical discussion on NRDW Landfill drilling,~~
~~2750E Building, Conference Room D-221~~~~12:30 - 1:00~~~~12:00 - 12:30~~ p.m. Lunch~~1:00 - 2:30~~~~12:30 - 2:30~~ p.m. *Landfill Mtg*
~~Drive by burial grounds (200E and 200W)~~

3:30 p.m. Return inspectors to Federal Building

LSP:gd

xc: D. G. Kachele, UNC
P. J. Krupin, DOE-RL
C. C. Meinhardt, Rockwell
M. G. Zimmerman, WHC

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The date of this letter is August 19, 1987. Ecology provided the letter to WHC for specific inclusion in the files.

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